



Emblem: "Soul Catcher" ...a Northwest Coast Indian symbol used to ward off spirits that brought physical or mental

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# Northwest Center for Outcomes Research in Older Adults: A VA HSR&D Center of Excellence

Veterans Affairs Puget Sound Health Care System (VAPSHCS) and  
the Portland VA Medical Center (PVAMC)

## Recent Article of Interest

### Beta-blockers as Single-Agent Therapy for Hypertension and the Risk of Mortality among Patients with Chronic Obstructive Pulmonary Disease

David Au, MD, MS, Chris L. Bryson, MD, MS, Vincent S. Fan, MD, MPH, Edmunds M. Udris, MPH, J. Randall Curtis, MD, MPH, Mary B. McDonell, MS, Stephan D. Fihn, MD, MPH

**P**atients with chronic obstructive pulmonary disease (COPD) often have coexisting cardiovascular disease. Due to concern over worsening airflow limitation, beta-blockers are less likely to be prescribed in patients with COPD when otherwise indicated. However, these agents have been demonstrated to reduce mortality and other important cardiovascular disease outcomes among patients with ischemic cardiac disease. Because many patients with COPD have co-existing ischemic cardiac disease, we hypothesized that beta-blockers may be associated with improved survival among patients with COPD and hypertension.

#### Methods

This study included patients enrolled in the Veterans Affairs-funded Ambulatory Care Quality Improvement Project (ACQUIP) between 1996 and 1999. ACQUIP was a randomized trial in the general internal medicine clinics of seven VA medical centers that tested whether monitoring patients' self-reported health and providing regular reports to primary care clinicians

improved clinical outcomes and patient satisfaction. As part of ACQUIP, baseline assessment of coexisting conditions was performed using a mailed survey. Outpatient pharmacy records were obtained from each site to ascertain the class of antihypertensive medication used.

Subjects were included if they returned the health inventory, had 2 years of follow-up, had a self-reported or ICD-9 coded diagnosis in the medical record of COPD and hypertension, had a prescription(s) in a single antihypertensive medication class in the year before enrollment; and had an estimated adherence to the antihypertensive medication regimen of 80% or more during the 90 days before the index date. The medication classes of interest included beta-blockers, angiotensin-converting enzyme inhibitors, thiazide diuretics, alpha-blockers, other antihypertensive agents, and calcium channel blockers.

The primary outcome was all-cause mortality during the 2-year follow-up period. A secondary outcome measure was the first

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# Cover Story

## *Beta-blockers (continued from Page 1)*

hospitalization for exacerbation of COPD during the follow-up period. To assess the association between the dose of antihypertensive agent and mortality risk, we stratified individual medications within each antihypertensive class into three dosage levels based on the modal dose. We used Cox proportional hazards models and stratification to adjust for potential confounding factors and to estimate the relative risk of death. Propensity scores for the probability of being on beta-blockers were generated to reduce potential bias by indication with logistic regression models. The study was approved by the Human Subjects Committee of the University of Washington.

### **Results**

We identified 1966 COPD patients with hypertension (2.5% were women) who had also been treated with a drug from a single antihypertensive medication class. Compared with patients receiving calcium channel blockers, those taking beta-blockers were similar with regard to Seattle Index of Comorbidity scores and prevalence of chronic heart failure or diabetes, but were more likely to have cardiac disease ( $p=0.02$ ) or a previous diagnosis of acute coronary syndrome ( $p=0.001$ ). Similar proportions of patients taking beta-blockers and calcium channel blockers had experienced COPD exacerbations during the prior 12 months, although those taking beta-blockers had filled fewer inhaled bronchodilator canisters.

### *Association between Antihypertensive Medication Class and Risk of All-Cause Mortality*

During the 2-year follow-up, 12.1% of patients died. Compared with patients who filled calcium channel blocker prescriptions, those who received beta-blockers had an approximate 50% reduction in all-cause mortality. Mortality among patients who had filled prescriptions for other classes

of anti-hypertensive agents was similar to those who had received calcium channel blockers.

### *Association between Beta-blocker Dose and Risk of All-Cause Mortality in Patients with a History of Cardiac Disease*

Of patients taking beta-blockers, 88% were taking either metoprolol or atenolol with a modal dose of 50 mg/d for both, and 9% were taking propranolol. Compared with patients taking calcium channel blockers, after adjusting for propensity score, all dosage levels of a beta-blocker were associated with lower mortality. When analyses were restricted to patients with a history of prior cardiac disease and adjusted for propensity score, the reduction in mortality associated with beta-blockers appeared to pertain only to patients with pre-existing cardiac disease. Compared with all other antihypertensive agents, calcium channel blockers did not appear to be associated with an elevated mortality risk.

### **Discussion**

We found that for COPD patients with hypertension, beta-blockers were associated with a reduction in all-cause mortality. The observed association was among patients with a previous history of cardiac disease, suggesting a beneficial effect similar to that found among patients without COPD. We also found no evidence of harm associated with beta-blocker use even at higher doses, which should counter the reticence of many practitioners to prescribe these drugs for COPD patients owing to concerns about worsening their patients' disease.

Beta-blockers appear to be safe and are associated with improved survival.

**Acknowledgements:** This study was funded by the Department of Veterans Affairs. Au, David H. et al. "Beta-blockers as Single-Agent Therapy for Hypertension and the Risk of Mortality among Patients with Chronic Obstructive Pulmonary Disease." *Am J Med.* 2004;117:925-931.

# Fellows Profile

## HSR&D Welcomes New Post-Doctoral Fellow: Christian Helfrich, PhD

**C**hristian is a new HSR&D Center of Excellence postdoctoral research fellow, joining us at the beginning of January. He and his wife, Alissa, and two children (Jack 3.5 and Lily 22 months) return to Seattle from Chapel Hill, North Carolina where Christian did his doctoral work in health policy and administration and developed an unhealthy fixation on college basketball. They lived in Seattle from 1997 to 2000 while Christian was doing his masters work in Health Services at UW and are delighted to be back home.

Christian's background is in organizational behavior with research interests in organizational innovation, innovation implementation, and basically any trendy multisyllabic management term ending in "tion." His dissertation research was on cancer research alliances implementing prevention and control research programs, and he previously worked on case studies of community health centers implementing new diabetes care programs. At the HSR&D, he is working with Anne Sales' QUERI team on an evaluation of quality improvement efforts at the VA for heart attacks.



In his spare time, Christian enjoys reading technical manuals and trying to mathematically model the behavior of his children on family walks. Both experiences have completely defeated him.

Alissa is working in the hospitality industry, providing 24/7 service to two house imps and a flighty research fellow. When she used to have free time, she indulged a predilection for feeding small, tree-dwelling rodents and providing foster care for vectors—er, rather—sick cats from the animal shelter.

# Other News

## Recent Awardees— Congratulations Drs. Boyko and Young

**B**essie Young, MD, MPH was recently recognized by the Fred Hutchinson Community Outreach Program for her long-term commitment to community services. Dr. Young is a recipient of Fred Hutchinson Cancer Research Center's Inaugural Community Action Award to honor her work in addressing kidney disease in the African American community. She was presented with the award on December 6, 2004 at a community breakfast featuring Dr. Marilyn Gaston, former Assistant U.S. Surgeon General. The award was established to recognize individuals and community organizations who go above and beyond the scope of their normal duties to improve health-care access and education, and to reduce health care disparities.

Dr. Young is an HSR&D Associate Investigator and Investigator at Seattle Epidemiologic Research and Information Center at Veteran Affairs Puget Sound Health Care System (VAPSHCS). Her research area of focus is racial and ethnic differences in diabetic kidney disease.

**E**dward Boyko, MD, MPH, was awarded the University of Washington Medicine Center of Excellence in women's Health 2004 Award for Outstanding Mentorship. Dr. Boyko is the second recipient of this award.

The UW Medicine of Excellence in Women's Health Award "seeks to recognize the accomplishment of UW School of Medicine (SoM) faculty" in advancing excellence in mentorship of faculty, particularly women and minority faculty. The Award recognizes that UW SoM faculty and trainees benefit significantly from the efforts of faculty mentors, and that the exceptional success of the UW Medicine enterprise in the areas of education, clinical care and research, derive from the immeasurable contributions of our faculty mentors.

Dr. Boyko is an HSR&D Associate Investigator and Director of Seattle Epidemiologic Research and Information Center at VAPSHCS and Chief of the General Internal Medicine Section at VAPSHCS. He is Professor of Medicine and Adjunct Professor of Epidemiology and Health Services.

## Pecoraro Lecturer: Lisa I. Iezzoni, MD, MSc

**L**isa I. Iezzoni, MD, MSc was the Pecoraro Lecturer in December 2004. Dr. Iezzoni is Professor of Medicine at Harvard Medical School, Beth Israel Deaconness Medical Center. The Pecoraro Lecture is sponsored by the University of Washington Department of Medicine and held in memory of VA clinician and investigator Dr. Roger Pecoraro. Her presentation was entitled "Improving Health Care Quality for Persons with Disabilities." The talk was built around the assumption that the American health care system is not structured to care effectively for persons with disabilities. Therefore, many persons with disabilities receive worse quality care than do other individuals. She offered evidence to support this assertion and gave specific examples of substantial care for persons with sensory or physical disabilities. She concluded by suggesting a framework for improving quality of care for this population.

She is a recipient of The Robert Wood Johnson Foundation's *Investigator Award in Health Policy Research* and the author of the recent book, *When Walking Fails* (University of California Press, 2003).

# Publications

## HSR&D 2005 National Meeting Abstracts

## 2004-2005 Publications

### February 16-18 2005 Washington D.C.

Bryson, C. Association Between Urine Cadmium and Hypertension, Microalbuminuria, and Reduced Renal Function.

Campbell, D. Expectations for Mood Improvement: Possible Implications for Primary Care Interventions.

Chaney, E. The Trajectory Toward National Rollout of Improved Depression Care: Building Villages, Not Empires.

Chaney, E/Bonner, L. Social Support Resources and Preferences in Depressed Veterans in Primary Care.

Chew, L. Can Health Behaviors Identify Patients at Increased Risk for Potentially Avoidable Hospitalizations?

Felker, B. Patient Characteristics Associated with Comorbid Depression and PTSD in VA Primary Care Patients.

Gerrity, M. Screening for Post Traumatic Stress Disorder in VA Primary Care Patients with Depression Symptoms.

Greiner, G. The State of Emergency Medicine in VHA: Results of the 2003 VHA Emergency Department Survey.

Kopjar, B. Acute Myocardial Infarction Among the Inpatients in VA Hospitals.

Liu, C-F. What Does It Take to Implement an Evidence-Based Depression Treatment in Primary Care?

Maciejewski, M. Utilization and Expenditures of Veterans Obtaining Primary Care at VAMCs and CBOCs.

Nelson, K. The Association Between Type of Health Insurance Coverage and Diabetes Care.

Pineros, S. Results of a Patient Education Demonstration Project.

Sloan, K. Low Density Lipoprotein in Ischemic Heart Disease Patients: Impact of Cut-Point on Facility Profiles.

Wallace, C. Status of Intervention Strategies after Completion of an Implementation Project: What was Sustained?

Arterburn DE, Maciejewski ML, Tsevat J. Impact of morbid obesity on medical expenditures in adults. *Int J Obes Relat Metab Disord.* 2005 Feb 01; [Epub ahead of print]

Arterburn DE, McDonell MB, Hedrick SC, Diehr P, Fihn SD. Association of body weight with condition-specific quality of life in male veterans. *Am J Med.* 2004 Nov 15;117(10):738-46.

Au DH, Udrys EM, Curtis JR, McDonell MB, Fihn SD; ACQUIP Investigators. Association between chronic heart failure and inhaled beta-2-adrenoceptor agonists. *Am Heart J.* 2004 Nov;148(5):915-20.

Curtis MP, Sales AE, Sullivan JH, Gray SL, Hedrick SC. Satisfaction with care among community residential care residents. *J Aging Health.* 2005 Feb;17(1):3-27.

Epler AJ, Kivlahan DR, Bush KR, Dobie DJ, Bradley KA. A brief readiness to change drinking algorithm: concurrent validity in female VA primary care patients. *Addict Behav.* 2005 Feb;30(2):389-95.

Fan VS, Au DH, McDonell MB, Fihn SD. Intraindividual change in SF-36 in ambulatory clinic primary care patients predicted mortality and hospitalizations. *J Clin Epidemiol.* 2004 Mar;57(3):277-83.

Jackson SL, Boyko EJ, Scholes D, Abraham L, Gupta K, Fihn SD. Predictors of urinary tract infection after menopause: a prospective study. *Am J Med.* 2004 Dec 15;117(12):903-11.

Maciejewski ML, Reiber GE, Smith DG, Wallace C, Hayes S, Boyko EJ. Effectiveness of diabetic therapeutic footwear in preventing reulceration. *Diabetes Care.* 2004 Jul;27(7):1774-82.

Maynard C, Cox GB, Hall J, Krupski A, Stark KD. Substance use and five-year survival in Washington State mental hospitals. *Adm Policy Ment Health.* 2004 Mar;31(4):339-45.

Reiber GE, Boyko EJ. Diabetes research in the Department of Veterans Affairs. *Diabetes Care.* 2004 May;27 Suppl 2:B95-8.

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# Other News and Events

## What's Art Got to Do with It?

**C**reativity, the merits of art, and the secret lives of co-workers were some of the topics the new Art Committee pursued as they explored how to creatively cover HSR&D's blank walls in our new home at Metropolitan Park. The result is a series of exhibitions with opening receptions called "HS Art & Tea."

"**Perspectives**" (on view through March 31) features paintings, mixed media, monoprints, and photographs by staff and families of HSR&D.

"**Art by Accretion**" in December was a participatory project allowing the passer-by to contribute items, art, and ideas to a string sculpture.

"**Dog Tags**," a remarkable series of photographs by Don Crowe (inspired and partly supported by the Pets for Vets program at the San Francisco VA Medical Center) will open in February in the reception area. HSR&D staff donated the funds to purchase frames.

Future art projects may include children's art, landscape photographs, and more interactive projects for staff.

### The Art Committee

Duncan Campbell	Lynn McFarland
Michael Donahue	Hong Nguyen
Jane Emens	Heather Ross
Ashley Hedeem	Nancy Sharp
Susan Hedrick	Jean Sullivan
Elliott Lowy	Carolyn Wallace

### Artists Contributing to "Perspectives"

Paul Bauck	Jane Emens
Kim Campbell	Lynne McFarland
Scheer Chan	Jean Sullivan

## Northwest HSR&D COE's Newsletter

If you have an article or idea that you would like to contribute to the newsletter, please contact Connie Nakano:

(206) 277-5122

Connie.nakano@med.va.gov

## New Funded Projects

New Statistical Methods for Analyzing Veteran's Health Care Costs (ECI 03-206). PI: Zhou A. 2005-2007

Creating HealtheVet Informatics Applications for Collaborative Care (MHS 03-218). PI: Chaney E. 2004-2006

Evaluating Quality of Care for Acute Coronary Syndromes in VHA (SDR 03-289). PI: Fihn S. 2004-2007

### *Publications (continued from Page 5)*

Sales AE, Pineros SL, Magid DJ, Every NR, Sharp ND, Rumsfeld JS. The association between clinical integration of care and transfer of veterans with acute coronary syndromes from primary care VHA hospitals. *BMC Health Serv Res.* 2005 Jan 13;5(1):2.

Sales AE, Plomondon ME, Magid DJ, Spertus JA, Rumsfeld JS. Assessing response bias from missing quality of life data: the Heckman method. *Health Qual Life Outcomes.* 2004 Sep 16;2(1):49.

Weston P, Alexander JH, Patel MR, Maynard C, Crawford L, Wagner GS. Hand-held echocardiographic examination of patients with symptoms of acute coronary syndromes in the emergency department: the 30-day outcome associated with normal left ventricular wall motion. *Am Heart J.* 2004 Dec;148(6):1096-101.

# Investigator Profile



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Matthew L. Maciejewski, PhD has been an Investigator in the HSR&D Center of Excellence since September 1998. He came to Seattle after finishing his PhD in Health Services Research at the University of Minnesota. He has been involved in four VA studies that have examined utilization and cost differences between veterans obtaining primary care at community-based outpatient clinics and VA medical centers. Matt is currently conducting an evaluation of the VA's 2002 medication copayment increase to examine whether the increased cost of VA-prescribed medications affects use of medications and VA services by veterans with diabetes and/or hypertension.

He has also conducted non-VA research in several areas. With former colleagues from Minnesota, Matt has participated in two studies of selection bias of managed care enrollees in the general Medicare population and has been PI on one study of selection bias in a sample of Medicare beneficiaries with diabetes. He is a co-investigator on a 12-year randomized clinical trial that is examining whether weight loss can improve outcomes for overweight and obese people with diabetes. Matt recently completed an evaluation of a disease management intervention in the Washington state Medicaid program with colleagues at the University of Washington. Matt is an Assistant Professor in the University of Washington's Department of Health Services where he co-teaches a research methods course with Dr. Paula Diehr and serves on Master's and PhD thesis committees.

Matt likes to spend his copious free time with his wife, Donna, and newborn daughter, Langley (pictured above). Matt's hobbies are buying wine in the anticipation of drinking it someday, sleeping, playing soccer and traveling. Matt's future hobby will be coaching Langley on whatever sport she chooses to play.

# Other News and Information

## Phone Listings for HSR&D Service, VA Central Office

Acting Director: Shirley Meehan, MBA, PhD  
(202) 254-0207  
Budget Analyst: Mary Jones, MBA  
(202) 254-0210  
Health Science Specialist: Susan Schiffner, RN, BSM, CCM  
(202) 254-0209  
Assistant Director: Phil Crewson, PhD  
(202) 254-0220  
Career Development Program Manager: L. Robert Small, Jr.  
(202) 254-0219  
Director for QUERI: Joe Francis, MD, MPH  
(202) 254-0289

## Funding Due Dates

~ Career Development Awards  
June 15 and December 15 2005  
~ Career Scientist Awards  
June 1 and December 1 2005  
~ HSR&D Merit Review IIRs and Merit Review Entry  
Program (MREP) Proposals  
June 15 and December 15 2005

## HSR&D Welcomes New Staff in 2004

**W**e would like to acknowledge the newest research staff to join our Center of Excellence. Research staff are integral to the day to day operations of our Center.

- ~ Alberto Bianco, Programmer for Collaborative Cardiac Care Project (Fihn)
- ~ Domin Chan, MS, PhC, Research Health Science Specialist for Value and Cost of Translating Collaborative Care Models and Creating HealthVet Informatics (Chaney)
- ~ Sheena Dacquel, Research Assistant for Collaborative Cardiac Care Project (Fihn)
- ~ Debra Durham, PhD, Staff Assistant for Annual Report Template (ART) Special Projects Office (Sullivan)
- ~ Jane Emens, Administrative Assistant for Improving Self-Management in Medicaid and Dual Enrolled Medicare People with Diabetes (Reiber)
- ~ Rogelio Garcia, IT Specialist for HSR&D Center of Excellence
- ~ Brian Gillespie, Programmer/Analyst for Collaborative Cardiac Care Project (Fihn)
- ~ Jeanne Knechtges, Program Assistant for Cardiac Assessment Reporting and Tracking System (Fihn)
- ~ Lynn McFarland, PhD, Research Health Science Specialist for Improving Self-Management in Medicaid and Dual Enrolled Medicare People with Diabetes and Impact of Neighborhood Environment on Health Status and Survival among Veterans (Reiber and Nelson)
- ~ Sara Miller, Research Health Science Specialist for Assessing Staffing and Patient Outcomes in VA (Hedrick)
- ~ Kara Peck, Statistical Assistant for A Population Based Study of Care and Outcomes in Lung and colorectal Cancer Patients (Au)
- ~ Anna Poole, Program Assistant for Cardiac Care Clinical Program Evaluation and Quality Enhancement Research Initiative (Fihn)
- ~ Laura Rabuck, Administrative Assistant for New Statistical Methods for Analyzing Veteran's Health Care Costs (Zhou) and Expanding and Testing VA Collaborative Care Models for Depression (ReTIDES) (Chaney)
- ~ Sheri Reder, PhD, Project Director and Co-Investigator for Assessing Staffing and Patient Outcomes in VA (Hedrick)
- ~ Rachel Smith, Program Support Assistant for Evaluating Quality of Care for Acute Coronary Syndromes in VHA (Sales)

**Website address for Northwest HSR&D COE:**

<http://www1.va.gov/pshsrd/>